



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200

**D5594-1**  
**Job Sheet 180815**

Accounting Job RD17-1048-01



Part No: D5594-1

Job Qty: 50 ea

Part Name: GH Bushing



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 7/17/18

Job Tracking No:

Due Date: 7/27/18

Created By: Marie Lajeunesse

Type: R+D

Description:

Note: DWG D5594-1 Rev:A4 IPP Rev.A New Issue 18/06/20 JFS Verified by:DD

Ship Via:

**POSITIVE RECALL**

EFFECTIVE 17 2018 10 21  
DAS  
RELEASED 9 DATE 13.10.04  
9-89 @ REVA

### Bill of Materials

### Job Routing

| Op No | Operation          | Qty    | Start Date | Due Date | Standard  |         | Workcenter/Supplier   |           | Sign-off |
|-------|--------------------|--------|------------|----------|-----------|---------|-----------------------|-----------|----------|
|       |                    |        |            |          | Setup hrs | Run Hrs | Workcenter / Supplier | Lead Time |          |
| 90    | Start up Operation | 50 Ea  | 7/27/18    | 7/27/18  | 0.00      | 0.00    | Start Up Machining    |           |          |
| 100   | Doosan             | 50 pcs | 7/27/18    | 7/27/18  | 0.00      | 7.14    | Doosan                |           |          |
| 110   | QC                 | 50 pcs | 7/27/18    | 7/27/18  | 0.00      | 0.00    | QC2                   |           |          |
| 120   | QC                 | 50 pcs | 7/27/18    | 7/27/18  | 0.00      | 0.00    | QC8                   |           |          |
| 130   | Packaging          | 50 pcs | 7/27/18    | 7/27/18  | 0.00      | 0.00    | Packaging3            |           |          |
| 140   | QC21-SA            | 50 Ea  | 7/27/18    | 7/27/18  | 0.00      | 0.00    | QC21                  |           |          |

Part Op Descriptions: 100 - 1-Turn as per Folio FC152 Rev: \_\_\_\_ & Dwg D5594 Rev: \_\_\_\_ 2-Deburr

### Job BOM

| Part / Item | Component Name     | Quantity            | Operation             | Container |
|-------------|--------------------|---------------------|-----------------------|-----------|
| M304R1.000  | 304 Round Bar 1.00 | 3.1500 ft (.063 ea) | 90-Start up Operation |           |

### Job Allocations

| Operation             | Component Part | Required | Inventory | Allocated |
|-----------------------|----------------|----------|-----------|-----------|
| 90-Start up Operation | M304R1.000     | 3        | 31        | 0         |

### Part Specifications

Specifications could not be found.

Plex 7/17/18 8:47 AM Dart.lajeunesse.marie

3.25 H

1.25 Prog + Method

8.25

7h Run



QA: \_\_\_\_\_ Date: \_\_\_\_\_

## WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

|                                                                           |                                                |                                                                                                                                                                                               |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |                       |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
|---------------------------------------------------------------------------|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|-----------------------|--|------------------------------------|-------------------------------------|------------------------------------|-------------------------------------------------|------------------------------------|------------------------------------|--------------------------------------------|----------------------------------|----------------------------------------|------------------------------------|----------------------------------------------|--------------------------------|------------------------------------|------------------------------------|-----------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____              |                                                | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input checked="" type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> |                                                            | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width:100%; border: none;"> <tr> <td style="width:15%;">Skid-tube <input type="checkbox"/></td> <td style="width:15%;">Cross tube <input type="checkbox"/></td> <td style="width:15%;">Water Jet <input type="checkbox"/></td> <td style="width:15%;">Engineering <input checked="" type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table> |                                               |                       |  | Skid-tube <input type="checkbox"/> | Cross tube <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Engineering <input checked="" type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Quality <input type="checkbox"/> | Thermoforming <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Other <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Composite <input type="checkbox"/> | Supplier <input type="checkbox"/> |  |
| Skid-tube <input type="checkbox"/>                                        | Cross tube <input type="checkbox"/>            | Water Jet <input type="checkbox"/>                                                                                                                                                            | Engineering <input checked="" type="checkbox"/>            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |                       |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Machining <input type="checkbox"/>                                        | Small Fab <input type="checkbox"/>             | Prod. Eng. Coord. <input type="checkbox"/>                                                                                                                                                    | Quality <input type="checkbox"/>                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |                       |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Thermoforming <input type="checkbox"/>                                    | Finishing <input type="checkbox"/>             | Rec/Store/Packaging <input type="checkbox"/>                                                                                                                                                  | Other <input type="checkbox"/>                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |                       |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Large Fab <input type="checkbox"/>                                        | Composite <input type="checkbox"/>             | Supplier <input type="checkbox"/>                                                                                                                                                             |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |                       |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Date : <u>13-10-09</u>                                                    |                                                | Step #:                                                                                                                                                                                       |                                                            | QTY Effective : <u>50</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                               | MRB (QSI042) Approval |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Description Work Order Deviation                                          |                                                |                                                                                                                                                                                               |                                                            | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                               |                       |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| <p>part superceded</p> <p>total length changed (see release drawing.)</p> |                                                |                                                                                                                                                                                               |                                                            | <p>Scrap + destroy.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                               |                       |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
|                                                                           |                                                |                                                                                                                                                                                               |                                                            | Completed By<br>DAS 9 9-89 <u>13-10-09</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                               |                       |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
|                                                                           |                                                |                                                                                                                                                                                               |                                                            | Lead hand / Supervisor<br>Approval Verification<br>DAS 9 9-89 <u>13-10-09</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                               |                       |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
|                                                                           |                                                |                                                                                                                                                                                               |                                                            | QC / QA Coordinator<br>Approval<br>DAS 9 9-89 <u>13-10-09</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                               |                       |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Root Cause                                                                |                                                | FAULT CATEGORY                                                                                                                                                                                |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |                       |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Environment <input type="checkbox"/>                                      | No Re-verification <input type="checkbox"/>    | Pressure/Forced <input type="checkbox"/>                                                                                                                                                      | Temperature/Cure <input type="checkbox"/>                  | Power Loss/Surge <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Positioned Wrong <input type="checkbox"/>     |                       |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Design <input checked="" type="checkbox"/>                                | Operator <input type="checkbox"/>              | Bending <input type="checkbox"/>                                                                                                                                                              | Set-up <input type="checkbox"/>                            | Folio/Program <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Outside Dimensions <input type="checkbox"/>   |                       |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Doc/Data <input type="checkbox"/>                                         | Offset/Setup <input type="checkbox"/>          | Centre Not Concentric <input type="checkbox"/>                                                                                                                                                | BOM/Route <input type="checkbox"/>                         | Grain <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Over/Under tolerance <input type="checkbox"/> |                       |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Equip/Tooling <input type="checkbox"/>                                    | Supplier <input type="checkbox"/>              | Cracks <input type="checkbox"/>                                                                                                                                                               | Broken/Damage/Defect <input type="checkbox"/>              | Weld <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Part Incorrect <input type="checkbox"/>       |                       |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Handling/Pre <input type="checkbox"/>                                     | Training <input type="checkbox"/>              | Crimp/Kink/Ripple/Wave <input type="checkbox"/>                                                                                                                                               | Inspection Incomplete/Unqualified <input type="checkbox"/> | Wrong Stock Pulled <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Part Lost/Missing <input type="checkbox"/>    |                       |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Material <input type="checkbox"/>                                         | Use for Testing <input type="checkbox"/>       | Cuffs <input type="checkbox"/>                                                                                                                                                                | Contamination <input type="checkbox"/>                     | Out of Sequence <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Part Moved <input type="checkbox"/>           |                       |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Internal Transport <input type="checkbox"/>                               | Poor Information <input type="checkbox"/>      | Crushing <input type="checkbox"/>                                                                                                                                                             | Countersink <input type="checkbox"/>                       | Off-set <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Drawing <input type="checkbox"/>              |                       |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Tribal Knowledge <input type="checkbox"/>                                 | Rushing <input type="checkbox"/>               | Heat Treat <input type="checkbox"/>                                                                                                                                                           | Cut Too Short <input type="checkbox"/>                     | Mislabeled <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Finish <input type="checkbox"/>               |                       |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| LOA <input type="checkbox"/>                                              | Product Improvement <input type="checkbox"/>   | Wave/Twist in Tube <input type="checkbox"/>                                                                                                                                                   | Instructions Incomplete/Unclear <input type="checkbox"/>   | <input checked="" type="checkbox"/> Fit/Function                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Misread <input type="checkbox"/>              |                       |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Substation <input type="checkbox"/>                                       | Process Improvement <input type="checkbox"/>   | Marks/Chatter <input type="checkbox"/>                                                                                                                                                        | Drill Holes <input type="checkbox"/>                       | Misaligned/off center <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Turning Sequence <input type="checkbox"/>     |                       |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Past Expiry Date <input type="checkbox"/>                                 | Manufacturing Process <input type="checkbox"/> | OTHER :                                                                                                                                                                                       |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |                       |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |
| Misidentified <input type="checkbox"/>                                    | Past Due <input type="checkbox"/>              |                                                                                                                                                                                               |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                               |                       |  |                                    |                                     |                                    |                                                 |                                    |                                    |                                            |                                  |                                        |                                    |                                              |                                |                                    |                                    |                                   |  |







DQA: \_\_\_\_\_ Date: \_\_\_\_\_



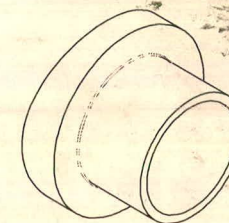
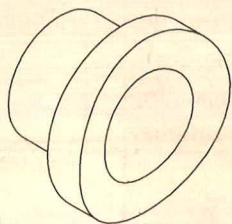
## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

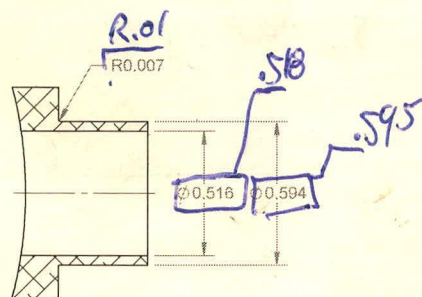
Work Order update only ☐

|                                                                                                                                                                         |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       |                                                 |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------|--|-----------------------|-------------------------------------------------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____                                                                                                            |                                                | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> |                                                            | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Thermoforming <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/><br/>           Composite <input type="checkbox"/> </div> <div>           Water Jet <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/><br/>           Supplier <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Quality <input type="checkbox"/><br/>           Other <input type="checkbox"/> </div> </div> |                                               |  |                       |                                                 |  |
| Date :                                                                                                                                                                  |                                                | Step #:                                                                                                                                                                            |                                                            | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  | MRB (QSI042) Approval |                                                 |  |
| Description Work Order Deviation                                                                                                                                        |                                                |                                                                                                                                                                                    |                                                            | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                               |  |                       | Completed By                                    |  |
| <div style="position: absolute; top: 100px; left: 100px; color: red; font-weight: bold;">             100%<br/>             100%<br/>             100%           </div> |                                                |                                                                                                                                                                                    |                                                            | <div style="position: absolute; top: 100px; left: 100px; color: red; font-weight: bold;">             100%<br/>             100%<br/>             100%           </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                               |  |                       | Lead hand / Supervisor<br>Approval Verification |  |
|                                                                                                                                                                         |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       | QC / QA Coordinator<br>Approval                 |  |
|                                                                                                                                                                         |                                                |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       |                                                 |  |
| Root Cause                                                                                                                                                              |                                                | FAULT CATEGORY                                                                                                                                                                     |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       |                                                 |  |
| Environment <input type="checkbox"/>                                                                                                                                    | No Re-verification <input type="checkbox"/>    | Pressure/Forced <input type="checkbox"/>                                                                                                                                           | Temperature/Cure <input type="checkbox"/>                  | Power Loss/Surge <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Positioned Wrong <input type="checkbox"/>     |  |                       |                                                 |  |
| Design <input type="checkbox"/>                                                                                                                                         | Operator <input type="checkbox"/>              | Bending <input type="checkbox"/>                                                                                                                                                   | Set-up <input type="checkbox"/>                            | Folio/Program <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Outside Dimensions <input type="checkbox"/>   |  |                       |                                                 |  |
| Doc/Data <input type="checkbox"/>                                                                                                                                       | Offset/Setup <input type="checkbox"/>          | Centre Not Concentric <input type="checkbox"/>                                                                                                                                     | BOM/Route <input type="checkbox"/>                         | Grain <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Over/Under tolerance <input type="checkbox"/> |  |                       |                                                 |  |
| Equip/Tooling <input type="checkbox"/>                                                                                                                                  | Supplier <input type="checkbox"/>              | Cracks <input type="checkbox"/>                                                                                                                                                    | Broken/Damage/Defect <input type="checkbox"/>              | Weld <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Part Incorrect <input type="checkbox"/>       |  |                       |                                                 |  |
| Handling/Pre <input type="checkbox"/>                                                                                                                                   | Training <input type="checkbox"/>              | Crimp/Kink/Ripple/Wave <input type="checkbox"/>                                                                                                                                    | Inspection Incomplete/Unqualified <input type="checkbox"/> | Wrong Stock Pulled <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Part Lost/Missing <input type="checkbox"/>    |  |                       |                                                 |  |
| Material <input type="checkbox"/>                                                                                                                                       | Use for Testing <input type="checkbox"/>       | Cuffs <input type="checkbox"/>                                                                                                                                                     | Contamination <input type="checkbox"/>                     | Out of Sequence <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Part Moved <input type="checkbox"/>           |  |                       |                                                 |  |
| Internal Transport <input type="checkbox"/>                                                                                                                             | Poor Information <input type="checkbox"/>      | Crushing <input type="checkbox"/>                                                                                                                                                  | Countersink <input type="checkbox"/>                       | Off-set <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Drawing <input type="checkbox"/>              |  |                       |                                                 |  |
| Tribal Knowledge <input type="checkbox"/>                                                                                                                               | Rushing <input type="checkbox"/>               | Heat Treat <input type="checkbox"/>                                                                                                                                                | Cut Too Short <input type="checkbox"/>                     | Mislabeled <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Finish <input type="checkbox"/>               |  |                       |                                                 |  |
| LOA <input type="checkbox"/>                                                                                                                                            | Product Improvement <input type="checkbox"/>   | Wave/Twist in Tube <input type="checkbox"/>                                                                                                                                        | Instructions Incomplete/Unclear <input type="checkbox"/>   | Fit/Function <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Misread <input type="checkbox"/>              |  |                       |                                                 |  |
| Substation <input type="checkbox"/>                                                                                                                                     | Process Improvement <input type="checkbox"/>   | Marks/Chatter <input type="checkbox"/>                                                                                                                                             | Drill Holes <input type="checkbox"/>                       | Misaligned/off center <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Turning Sequence <input type="checkbox"/>     |  |                       |                                                 |  |
| Past Expiry Date <input type="checkbox"/>                                                                                                                               | Manufacturing Process <input type="checkbox"/> |                                                                                                                                                                                    |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       |                                                 |  |
| Misidentified <input type="checkbox"/>                                                                                                                                  | Past Due <input type="checkbox"/>              | OTHER :                                                                                                                                                                            |                                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                               |  |                       |                                                 |  |

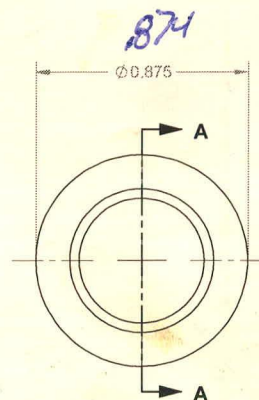




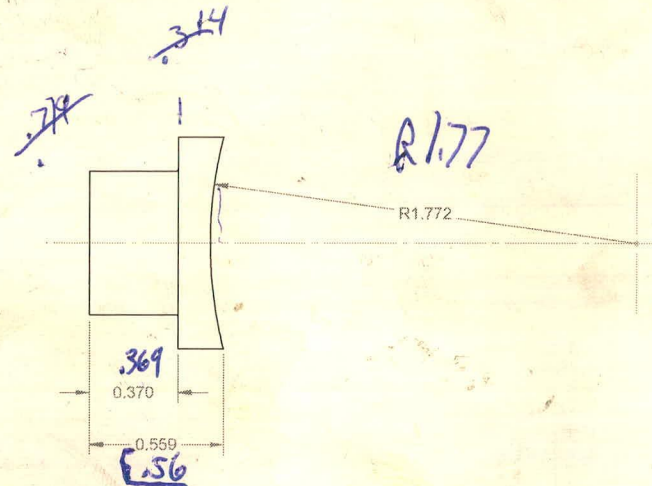
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SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 180815 M.C.S  
18-07-17



SECTION A-A



D5594-1 GH BUSHING



NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL ROUND BAR  
PER ASTM A276  
REF M304R  
OR: AISI 304/316 STAINLESS STEEL BAR  
PER ASTM A276 OR ASTM A240  
REF M304B

- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER DART QSI 044 6.7
- 7) WEIGHT: 0.02 lbs

PRELIMINARY ISSUE

|                                                                                                                                                                                                                                                                          |     |                                                   |  |              |          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|---------------------------------------------------|--|--------------|----------|
| A                                                                                                                                                                                                                                                                        |     | NEW ISSUE                                         |  | NO           | 17.10.31 |
| REV.                                                                                                                                                                                                                                                                     |     | DESCRIPTION                                       |  | BY           | DATE     |
| DESIGN                                                                                                                                                                                                                                                                   | AJS | DART AEROSPACE LTD<br>HAWKESBURY, ONTARIO, CANADA |  | REV. A       |          |
| DRAWN                                                                                                                                                                                                                                                                    | NO  |                                                   |  | SHEET 1 OF 2 |          |
| CHECKED                                                                                                                                                                                                                                                                  | ZF  | DRAWING NO. D5594                                 |  | SCALE        |          |
| MFG. APPR.                                                                                                                                                                                                                                                               | JFS | TITLE                                             |  | NTS          |          |
| APPROVED                                                                                                                                                                                                                                                                 |     | GH COMPONENTS (EC130)                             |  |              |          |
| DE APPR.                                                                                                                                                                                                                                                                 |     | DATE 17.10.31                                     |  |              |          |
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S012410  
5018003 12



DQA: \_\_\_\_\_ Date: \_\_\_\_\_

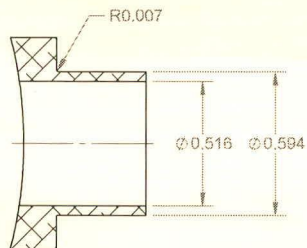
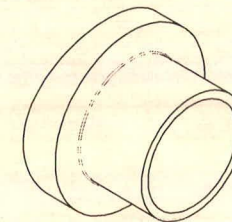
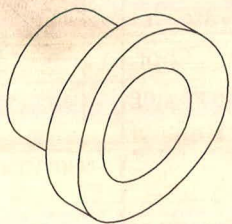


## WORK ORDER NON-CONFORMANCE / UPDATE

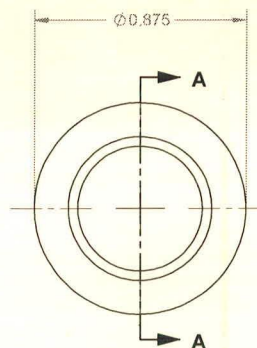
QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only ☐

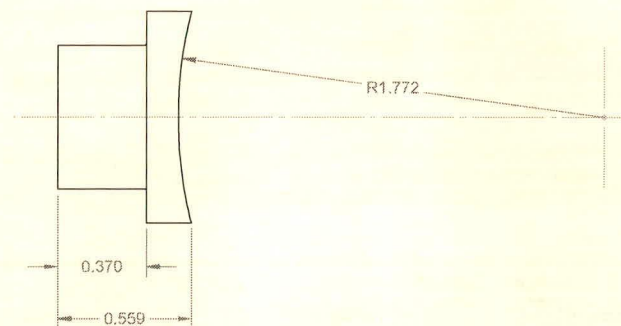
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|--------------------------------------------------------------|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|-----------------------------------|--------------------------|----------------------------------------------|--------------------------|----------------------|--------------------------|-----------|-------------|-----------|-----------|-------------------|---------|---------------|-----------|---------------------|-------|-----------|-----------|----------|--|
| Work Order: _____<br><br>Part No. _____<br><br>NCR No. _____ |                          | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/><br>Suspected Unapproved <input type="checkbox"/> |                          | <b>AGAINST DEPARTMENT/PROCESS</b><br><br><table style="width:100%; border: none;"> <tr> <td style="width:12.5%;">Skid-tube</td><td style="width:12.5%;">Cross tube</td><td style="width:12.5%;">Water Jet</td><td style="width:12.5%;">Engineering</td></tr> <tr> <td>Machining</td><td>Small Fab</td><td>Prod. Eng. Coord.</td><td>Quality</td></tr> <tr> <td>Thermoforming</td><td>Finishing</td><td>Rec/Store/Packaging</td><td>Other</td></tr> <tr> <td>Large Fab</td><td>Composite</td><td>Supplier</td><td></td></tr> </table> |                          |                                   |                          |                                              |                          | Skid-tube            | Cross tube               | Water Jet | Engineering | Machining | Small Fab | Prod. Eng. Coord. | Quality | Thermoforming | Finishing | Rec/Store/Packaging | Other | Large Fab | Composite | Supplier |  |
| Skid-tube                                                    | Cross tube               | Water Jet                                                                                                                                                                          | Engineering              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                                   |                          |                                              |                          |                      |                          |           |             |           |           |                   |         |               |           |                     |       |           |           |          |  |
| Machining                                                    | Small Fab                | Prod. Eng. Coord.                                                                                                                                                                  | Quality                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                                   |                          |                                              |                          |                      |                          |           |             |           |           |                   |         |               |           |                     |       |           |           |          |  |
| Thermoforming                                                | Finishing                | Rec/Store/Packaging                                                                                                                                                                | Other                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                                   |                          |                                              |                          |                      |                          |           |             |           |           |                   |         |               |           |                     |       |           |           |          |  |
| Large Fab                                                    | Composite                | Supplier                                                                                                                                                                           |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                                   |                          |                                              |                          |                      |                          |           |             |           |           |                   |         |               |           |                     |       |           |           |          |  |
| Date :                                                       |                          | Step #:                                                                                                                                                                            |                          | QTY Effective :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                                   | MRB (QSI042) Approval    |                                              |                          |                      |                          |           |             |           |           |                   |         |               |           |                     |       |           |           |          |  |
| Description Work Order Deviation                             |                          |                                                                                                                                                                                    |                          | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                          |                                   |                          | Completed By                                 |                          |                      |                          |           |             |           |           |                   |         |               |           |                     |       |           |           |          |  |
|                                                              |                          |                                                                                                                                                                                    |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                                   |                          | Lead hand / Supervisor Approval Verification |                          |                      |                          |           |             |           |           |                   |         |               |           |                     |       |           |           |          |  |
|                                                              |                          |                                                                                                                                                                                    |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                                   |                          | QC / QA Coordinator Approval                 |                          |                      |                          |           |             |           |           |                   |         |               |           |                     |       |           |           |          |  |
|                                                              |                          |                                                                                                                                                                                    |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                                   |                          |                                              |                          |                      |                          |           |             |           |           |                   |         |               |           |                     |       |           |           |          |  |
| <b>Root Cause</b>                                            |                          | <b>FAULT CATEGORY</b>                                                                                                                                                              |                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                                   |                          |                                              |                          |                      |                          |           |             |           |           |                   |         |               |           |                     |       |           |           |          |  |
| Environment                                                  | <input type="checkbox"/> | No Re-verification                                                                                                                                                                 | <input type="checkbox"/> | Pressure/Forced                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <input type="checkbox"/> | Temperature/Cure                  | <input type="checkbox"/> | Power Loss/Surge                             | <input type="checkbox"/> | Positioned Wrong     | <input type="checkbox"/> |           |             |           |           |                   |         |               |           |                     |       |           |           |          |  |
| Design                                                       | <input type="checkbox"/> | Operator                                                                                                                                                                           | <input type="checkbox"/> | Bending                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <input type="checkbox"/> | Set-up                            | <input type="checkbox"/> | Folio/Program                                | <input type="checkbox"/> | Outside Dimensions   | <input type="checkbox"/> |           |             |           |           |                   |         |               |           |                     |       |           |           |          |  |
| Doc/Data                                                     | <input type="checkbox"/> | Offset/Setup                                                                                                                                                                       | <input type="checkbox"/> | Centre Not Concentric                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <input type="checkbox"/> | BOM/Route                         | <input type="checkbox"/> | Grain                                        | <input type="checkbox"/> | Over/Under tolerance | <input type="checkbox"/> |           |             |           |           |                   |         |               |           |                     |       |           |           |          |  |
| Equip/Tooling                                                | <input type="checkbox"/> | Supplier                                                                                                                                                                           | <input type="checkbox"/> | Cracks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <input type="checkbox"/> | Broken/Damage/Defect              | <input type="checkbox"/> | Weld                                         | <input type="checkbox"/> | Part Incorrect       | <input type="checkbox"/> |           |             |           |           |                   |         |               |           |                     |       |           |           |          |  |
| Handling/Pre                                                 | <input type="checkbox"/> | Training                                                                                                                                                                           | <input type="checkbox"/> | Crimp/Kink/Ripple/Wave                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <input type="checkbox"/> | Inspection Incomplete/Unqualified | <input type="checkbox"/> | Wrong Stock Pulled                           | <input type="checkbox"/> | Part Lost/Missing    | <input type="checkbox"/> |           |             |           |           |                   |         |               |           |                     |       |           |           |          |  |
| Material                                                     | <input type="checkbox"/> | Use for Testing                                                                                                                                                                    | <input type="checkbox"/> | Cuffs                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <input type="checkbox"/> | Contamination                     | <input type="checkbox"/> | Out of Sequence                              | <input type="checkbox"/> | Part Moved           | <input type="checkbox"/> |           |             |           |           |                   |         |               |           |                     |       |           |           |          |  |
| Internal Transport                                           | <input type="checkbox"/> | Poor Information                                                                                                                                                                   | <input type="checkbox"/> | Crushing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input type="checkbox"/> | Countersink                       | <input type="checkbox"/> | Off-set                                      | <input type="checkbox"/> | Drawing              | <input type="checkbox"/> |           |             |           |           |                   |         |               |           |                     |       |           |           |          |  |
| Tribal Knowledge                                             | <input type="checkbox"/> | Rushing                                                                                                                                                                            | <input type="checkbox"/> | Heat Treat                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <input type="checkbox"/> | Cut Too Short                     | <input type="checkbox"/> | Mislabeled                                   | <input type="checkbox"/> | Finish               | <input type="checkbox"/> |           |             |           |           |                   |         |               |           |                     |       |           |           |          |  |
| LOA                                                          | <input type="checkbox"/> | Product Improvement                                                                                                                                                                | <input type="checkbox"/> | Wave/Twist in Tube                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <input type="checkbox"/> | Instructions Incomplete/Unclear   | <input type="checkbox"/> | Fit/Function                                 | <input type="checkbox"/> | Misread              | <input type="checkbox"/> |           |             |           |           |                   |         |               |           |                     |       |           |           |          |  |
| Substation                                                   | <input type="checkbox"/> | Process Improvement                                                                                                                                                                | <input type="checkbox"/> | Marks/Chatter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <input type="checkbox"/> | Drill Holes                       | <input type="checkbox"/> | Misaligned/off center                        | <input type="checkbox"/> | Turning Sequence     | <input type="checkbox"/> |           |             |           |           |                   |         |               |           |                     |       |           |           |          |  |
| Past Expiry Date                                             | <input type="checkbox"/> | Manufacturing Process                                                                                                                                                              | <input type="checkbox"/> | OTHER :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                          |                                   |                          |                                              |                          |                      |                          |           |             |           |           |                   |         |               |           |                     |       |           |           |          |  |
| Misidentified                                                | <input type="checkbox"/> | Past Due                                                                                                                                                                           | <input type="checkbox"/> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                          |                                   |                          |                                              |                          |                      |                          |           |             |           |           |                   |         |               |           |                     |       |           |           |          |  |



**SECTION A-A**



**D5594-1 GH BUSHING**



**NOTES:**

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL ROUND BAR  
PER ASTM A276  
REF M304R  
OR: AISI 304/316 STAINLESS STEEL BAR  
PER ASTM A276 OR ASTM A240  
REF M304B
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER DART QSI 044 6.7
- 7) WEIGHT: 0.02 lbs

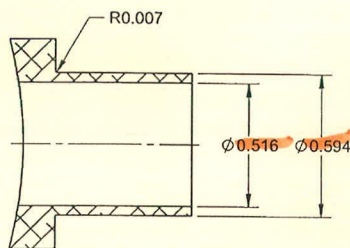
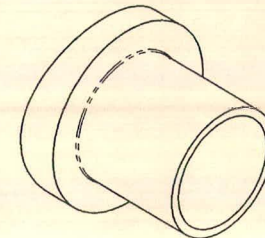
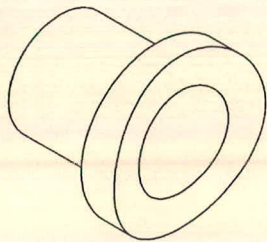
**PRELIMINARY ISSUE**

|             |             |                                                                                                                                                                                                                                                                                                     |              |
|-------------|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| A NEW ISSUE |             | NO                                                                                                                                                                                                                                                                                                  | 17.10.31     |
| REV.        | DESCRIPTION | BY                                                                                                                                                                                                                                                                                                  | DATE         |
| DESIGN      | AJS         | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA                                                                                                                                                                                                                                            |              |
| DRAWN       | NO          |                                                                                                                                                                                                                                                                                                     |              |
| CHECKED     | ZF          | DRAWING NO.                                                                                                                                                                                                                                                                                         | REV. A4      |
| MFG. APPR.  | JFS         | D5594                                                                                                                                                                                                                                                                                               | SHEET 1 OF 2 |
| APPROVED    |             | TITLE                                                                                                                                                                                                                                                                                               | SCALE        |
| DE APPR.    |             | GH COMPONENTS (EC130)                                                                                                                                                                                                                                                                               | NTS          |
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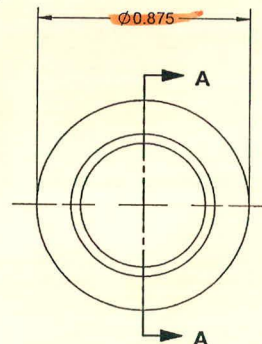




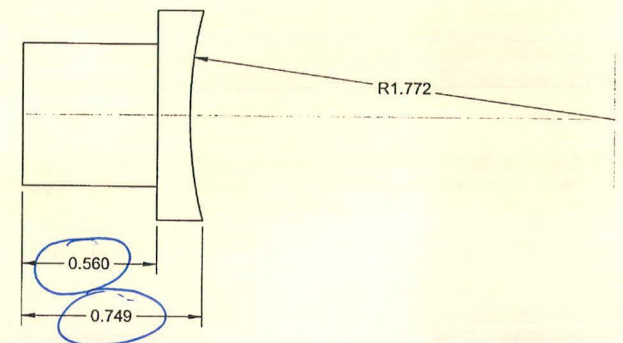




**SECTION A-A**



**D5594-1 GH BUSHING**



**NOTES:**

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL ROUND BAR  
PER ASTM A276  
REF DART SPEC M304R  
OR  
AISI 304/316 STAINLESS STEEL BAR  
PER ASTM A276 OR ASTM A240  
REF DART SPEC M304B
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER DART QSI 044 6.7
- 7) WEIGHT: 0.03 lbs

**RELEASED**

2018 OCT 02  
ECN 18-817

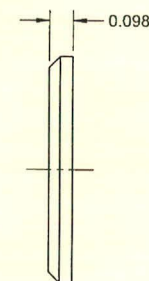
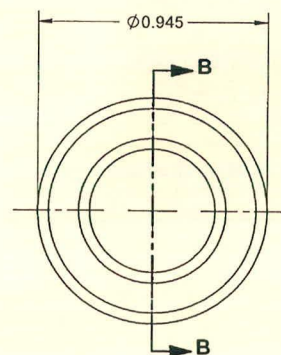
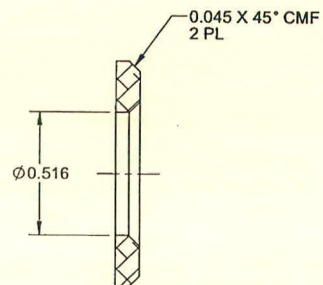
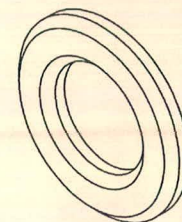
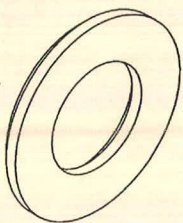
**APPROVED**

| A          |     | NEW ISSUE                                                |  | ZF                                                                                                                                                                                                                                                         | 17.10.31 |
|------------|-----|----------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|
| REV.       |     | DESCRIPTION                                              |  | BY                                                                                                                                                                                                                                                         | DATE     |
| DESIGN     | AJS | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA |  | REV. A<br>DRAWING NO.<br><b>D5594</b><br>SHEET 1 OF 2<br>TITLE<br><b>GH COMPONENTS (EC130)</b><br>SCALE<br>NTS                                                                                                                                             |          |
| DRAWN      | ZF  |                                                          |  |                                                                                                                                                                                                                                                            |          |
| CHECKED    | MW  |                                                          |  |                                                                                                                                                                                                                                                            |          |
| MFG. APPR. | JFS |                                                          |  |                                                                                                                                                                                                                                                            |          |
| APPROVED   | NO  |                                                          |  |                                                                                                                                                                                                                                                            |          |
| DE APPR.   | CP  | DATE<br><b>17.10.31</b>                                  |  | COPYRIGHT © 2017 BY DART AEROSPACE LTD<br>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COMMERCE IN ANY OTHER MANNER WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD. |          |
|            |     |                                                          |  |                                                                                                                                                                                                                                                            |          |









# NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL ROUND BAR  
PER ASTM A276  
REF DART SPEC M304R  
OR  
AISI 304/316 STAINLESS STEEL BAR  
PER ASTM A276 OR ASTM A240  
REF DART SPEC M304B
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY PER DART QSI 044 6.7
- 7) WEIGHT: 0.01 lbs

RELEASED

2018 OCT 02

APPROVED

|            |          |
|------------|----------|
| DESIGN     | AJS      |
| DRAWN      | ZF       |
| CHECKED    | MW       |
| MFG. APPR. | JFS      |
| APPROVED   | NO       |
| DE APPR.   | CP       |
| DATE       | 17.10.31 |

**DART AEROSPACE LTD**  
HAWKESBURY, ONTARIO, CANADA

DRAWING NO. **D5594** REV. A  
TITLE **GH COMPONENTS (EC130)** SCALE NTS  
SHEET 2 OF 2

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Entered: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. \_\_\_\_\_

Route update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |                                                                                 |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------|--|
| Job: <u>180815</u><br>Part No. <u>D 5594-1</u>                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  | <b>DISPOSITION</b><br>Rework <input type="checkbox"/><br>Scrap <input checked="" type="checkbox"/><br>Use-as-is <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |  | <b>DEPARTMENT/PROCESS</b><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/> </div> <div>           Eng. (Non-AW) <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/> </div> <div>           Engineering <input checked="" type="checkbox"/><br/>           Water Jet <input type="checkbox"/><br/>           Supplier <input type="checkbox"/><br/>           Quality <input type="checkbox"/> </div> </div> |  |                                                                                 |  |
| Date : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  | Sequence # : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | QTY Affected : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |  | MRB (QSI042)<br><i>CP</i> <b>DAS</b><br><b>12</b><br><b>9-89</b> <i>14/14/5</i> |  |
| <b>Description Work Order Deviation</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  | <b>Disposition</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |                                                                                 |  |
| D 5594-1 manufactured to Rev. A4.<br>Changes made at Rev A render these<br>Bushings obsolete                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  | Scrap Qty (50) D5594-1<br>bushings                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  |                                                                                 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  | Completed By<br><div style="font-size: 2em; margin-top: 10px;">1</div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                                                                 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  | Lead hand / Supervisor                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |                                                                                 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |  | QC / QA Coordinator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                                                                                 |  |
| <b>Root Cause</b><br><div style="display: flex; flex-direction: column; gap: 5px;"> <div>Operator <input type="checkbox"/></div> <div>Manufacturing Process <input type="checkbox"/></div> <div>Equip/Tooling <input type="checkbox"/></div> <div>Handling/Preservation <input type="checkbox"/></div> <div>Material <input type="checkbox"/></div> <div>Product Improvement <input type="checkbox"/></div> <div>Process Improvement <input type="checkbox"/></div> <div>Human Factors <input type="checkbox"/></div> </div> |  | <b>FAULT CATEGORY</b><br><div style="display: flex; flex-wrap: wrap;"> <div style="width: 33%;"> <input type="checkbox"/> Pressure/Forced<br/> <input type="checkbox"/> Bending<br/> <input type="checkbox"/> Crushing<br/> <input type="checkbox"/> Cracks<br/> <input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist<br/> <input type="checkbox"/> Marks/Chatter<br/> <input type="checkbox"/> Mislabeled         </div> <div style="width: 33%;"> <input type="checkbox"/> Contamination<br/> <input type="checkbox"/> Misaligned/off center<br/> <input type="checkbox"/> BOM/Route<br/> <input type="checkbox"/> Broken/Damage/Defect<br/> <input type="checkbox"/> Incomplete/Unclear Instructions<br/> <input type="checkbox"/> Drill Holes<br/> <input type="checkbox"/> Fit/Function         </div> <div style="width: 33%;"> <input type="checkbox"/> Power Loss/Surge<br/> <input type="checkbox"/> Folio/Program<br/> <input type="checkbox"/> Grain Direction<br/> <input type="checkbox"/> Weld<br/> <input type="checkbox"/> Wrong Stock Pulled<br/> <input type="checkbox"/> Out of Sequence<br/> <input type="checkbox"/> Off-set/Set-up         </div> <div style="width: 33%;"> <input type="checkbox"/> Positioned Wrong<br/> <input type="checkbox"/> Outside Tolerance<br/> <input checked="" type="checkbox"/> Drawing<br/> <input type="checkbox"/> Finish<br/> <input type="checkbox"/> Part Lost/Missing<br/> <input type="checkbox"/> Misread         </div> </div> |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |                                                                                 |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |  | Other/Details:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  |                                                                                 |  |



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